### (19) World Intellectual Property Organization

International Bureau



## - 1 COLO CONTROL DE CONTROL CON CONTROL CON LO CONTROL DE CONTROL DE CONTROL DE CONTROL DE CONTROL DE CONTROL

(43) International Publication Date 30 June 2005 (30.06.2005)

**PCT** 

# (10) International Publication Number WO 2005/059363 A1

(51) International Patent Classification<sup>7</sup>: 39/00, F02B 75/24

F04B 27/02,

(21) International Application Number:

PCT/EP2004/013872

- (22) International Filing Date: 6 December 2004 (06.12.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: MI2003A002493

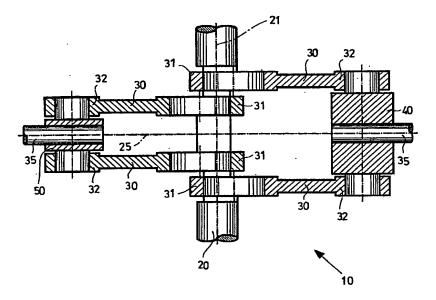
17 December 2003 (17.12.2003) IT

- (71) Applicant (for all designated States except US): NUOVO PIGNONE HOLDINGS S.P.A. [IT/IT]; Via F. Matteucci, 2, I-50127 Firenze (IT).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CAMPO, Nicola [IT/IT]; Via I Settembre, 97, I-50019 Sesto Fiorentino (Firenze) (IT). PRATESI, Simone [IT/IT]; Frazione Gracchia, 50/a, I-50039 Vicchio (Firenze) (IT). GRAZIANI, Franco [IT/IT]; Via Aretina, 346, I-50136 Firenze (IT).

- (74) Agents: DE GREGORI, Antonella et al.; Ing. Barzano' & Zanardo Milano S.p.A., Via Borgonuovo, 10, I-20121 Milano (IT).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: CRANK GEAR FOR A RECIPROCATING COMPRESSOR



(57) Abstract: Crank gear (10) for a reciprocating compressor of the type equipped with at least one module which has two lines with two opposite cylinders. The crank gear is suitable for constraining the two cylinders to a crankshaft (20), so as to align the two cylinders, opposite each other with respect to an axis (21) of the shaft (20). The crank gear (10) is equipped with two rods (35), a series of connecting rods (30) and two cross heads (40) and (50). The series of identical connecting rods (30) is symmetrically positioned with respect to the alignment axis (25) of the two cylinders and furthermore the overall barycentre of the series of connecting rods lies on the axis (25) and on the axis (21) of the shaft (20) so that the whole of the shaft (20) is both statically and dynamically balanced.



## WO 2005/059363 A1



#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.